

Rogers County, Oklahoma

DbC—Dennis-Bates complex, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 3kzk

Elevation: 500 to 1,360 feet

Mean annual precipitation: 35 to 46 inches

Mean annual air temperature: 57 to 65 degrees F

Frost-free period: 170 to 235 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Dennis and similar soils: 50 percent

Bates and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dennis

Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Clayey residuum weathered from shale

Typical profile

A - 0 to 14 inches: silt loam

BA - 14 to 18 inches: loam

Bt1 - 18 to 34 inches: clay loam

Bt2 - 34 to 62 inches: clay

Properties and qualities

Slope: 3 to 5 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Ecological site: Loamy prairie (Northeast) PE 62-80
(R112XY059OK)
Other vegetative classification: Unnamed (G112XY091OK)

Description of Bates

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy residuum weathered from sandstone and shale

Typical profile

A - 0 to 16 inches: loam
Bt - 16 to 30 inches: clay loam
BC - 30 to 36 inches: gravelly clay loam
Cr - 36 to 40 inches: bedrock

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: Loamy prairie (Northeast) PE 62-80
(R112XY059OK)
Other vegetative classification: Unnamed (G112XY026OK)

Minor Components

Collinsville

Percent of map unit: 5 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Shallow prairie (Central) PE 62-80 (R112XY083OK)
Other vegetative classification: Unnamed (G112XY098OK)

Parsons

Percent of map unit: 5 percent

Landform: Paleoterraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: Claypan prairie PE 62-80 (R112XY010OK)

Other vegetative classification: Unnamed (G112XY078OK)

Data Source Information

Soil Survey Area: Rogers County, Oklahoma

Survey Area Data: Version 10, Sep 11, 2015